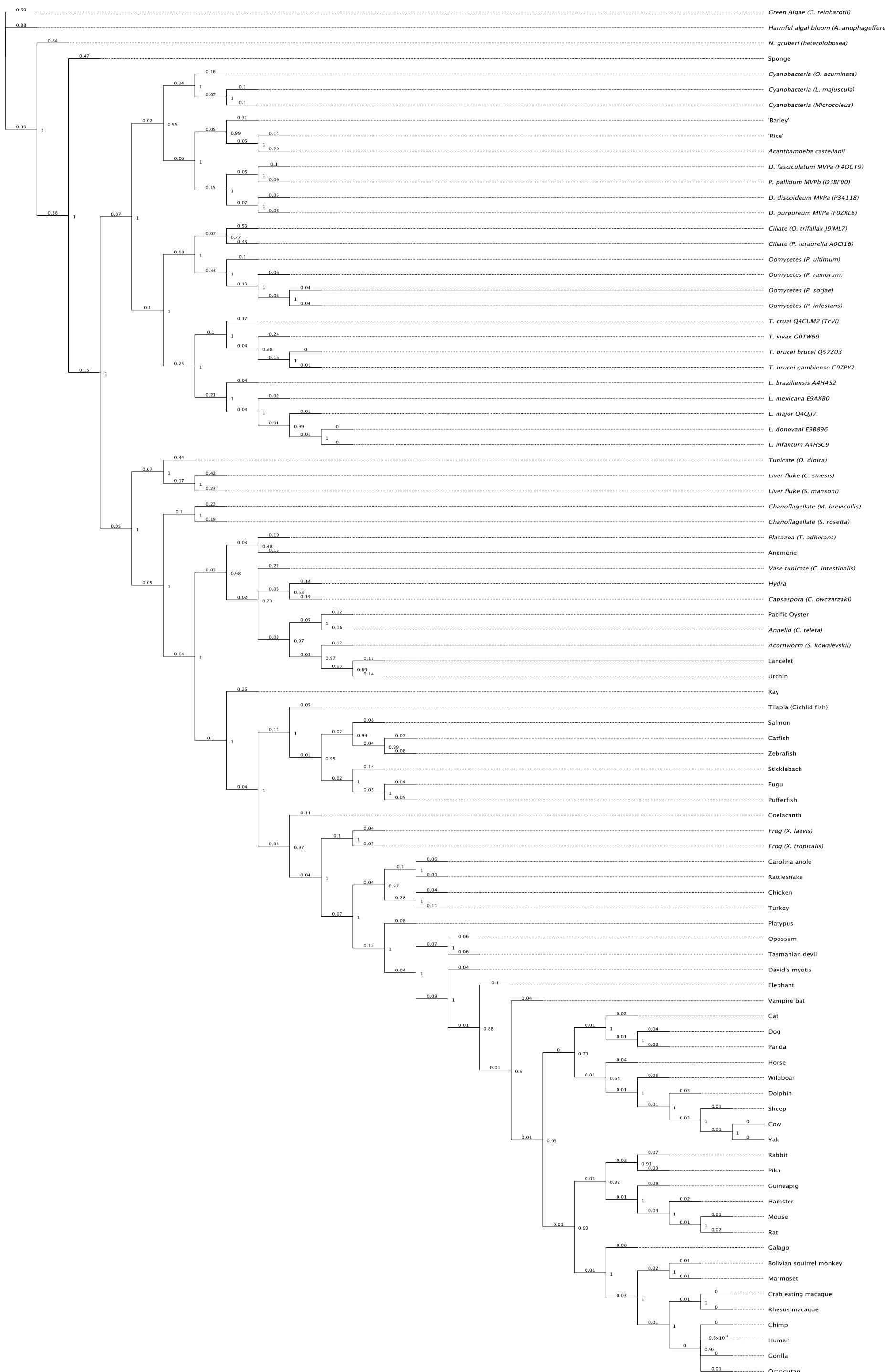


S1a A Mr Bayes tree of the sequences included in the reconstruction of the opisthokont ancestor. Node values show posterior probability, branch value shows number of replacements per residue. Note that the cat and rattlesnake are placed as anticipated even though they are from mRNA.



S1b A Mr Bayes tree of all sequences used in the construction of the ancestor of all eukaryotes. It includes the cyanobacteria as these are likely to be derived from a eukaryote either by lateral gene transfer or due to contamination. Node values show posterior probability, branch value shows number of replacements per residue.